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An

Inaugural Dissertation

Rejected March 22d 1825

on

Bilious Fever

by

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of

Alabama.

1825

Numerous are the diseases incident to man in his fallen and miserable condition.

And various are the remedies applicable to each individual form of disease. And Bilious Fever may be considered as occurring among the inhabitants of the southern states more frequently than any other disease in the long catalogue of complaints. As I have chosen this for my dissertation, though well aware of my incapability of doing the subject that justice which it demands. I shall however offer a few opinions relative to the disease. And should I be too precipitate, or ignorant of the case shall expect your indulgence and correction

Bilious Fever most frequently occurs in low marshy or moist grounds acted upon by heat for a length of time, which generally send forth exhalations

usually termed Marsh Miasmata. And never fail to be prolific sources of this disease Marsh Miasma has undoubtedly the peculiar effect of inducing fever on human bodies, exposed under certain circumstances to its influence. It is though too generally understood that, Marshes are the only sources from whence these exhalations arise. But they also proceed from moist earth, slime, mud, or mire. and also from low damp argillaceous soils covered with fallen timber in a decaying state. As this timber decays, it emits effluvia, which are deleterious to health, and is almost certain to produce fever,

And we generally find them assuming the Bilious character. They are more powerful, virulent, and concentrated, in hot climates and warm seasons, than in temperate ones. It further appears that the type

or periodical evolutions of fever which they induce, are governed by the degree of concentrations they possess, the type being more continued and less remittent, in proportion to the power of these exhalations. We however meet with attacks of this fever in high dry and elevated situations, after a long continuance of dry weather, which shews that Marsh miasma is not the only source from whence Bilious Fever is generated. And is occasionally owing to Epidemic influence, with regard to the nature of this epidemic influence, whether depending on a wet or dry state of the atmosphere, we are at present entirely ignorant.

Proximate Cause

As regards the proximate cause of fever, there is a considerable diversity of

opinions, among the most distinguished medical men. Some supposing it to consist in a noxious matter introduced or generated in the system - The increased action of the heart and arteries being an effort of nature, to expel the morbific matter from the system. Others supposing it to be owing to an increased secretion of bile. And others again attributing it to a spasmodic constriction of the extreme vessels on the surface of the body. Which was indeed the doctrine taught by the late Doctor Cullen.
But I think it more probable that the first impression is made on the stomach, and by sympathy communicated to other parts of the body. To investigate these different hypothesis, would lead me into a train of theoretical reasoning inconsistent with the intention

tion of this inaugural dissertation, or my abilities, and shall therefore leave the investigation of it for some one more capable of doing the subject justice than myself

Remote Cause

The remote cause of this disease is owing to the action of Marsh or human miasmata applied or introduced into the system. Where vegitable matter has been exposed to moisture & heat for a time as rain or dews, and then the falling of the rays of that bright god of the day which dispenses to us light and heat upon it, ~~which~~ effluvia are emitted which are almost certain to produce this disease, hence in newly settled countries where there is a great deal of timber felled this is allowed to decay, and we often see this fever produced from it

or from marshes which is in fact the most abundant sources of this disease. and we most always find it prevailing more in low damp marshy lands than other places, The exhalations arising from mud, mire, slime &c are likewise sources from whence this disease originates This disease takes place from human miasma. As in visiting a person who is labouring under the disease, there is an exudation from the skin which is productive of the disease at times, or from fomites — we have known the disease to be contracted from the clothes of those who had previously been diseased. and a great many others, might be mentioned, But I think those by far the most common, and shall therefore mention no more of them. —

Exciting Causes.

Every thing which has a tendency to

enervate the body may be looked upon as the exciting cause of fever. And accordingly we find it often arising from great bodily fatigue, too great an indulgence in sensual pleasures, intemperance in eating and drinking, and now and then from the suppression of some long accustomed discharge.

The passions of the mind are also considered as agents in the production of fever, such as joy, grief, fear, anxiety &c But the occurrence of some other cause seems necessary to produce this effect. The most usual exciting cause is cold, the application of cold to the body gives a check to perspiration, and from that cause produces this disease. And its morbid effects seem to depend partly upon the circumstances of the body of

the person to whom it is applied. The circumstances which seem to give the application of cold a due effect, and its degree of intensity, the length of time applied or its having a degree of moisture accompanying it. The circumstances which render persons more liable to be affected by cold, seem to be debility, induced by great fatigue or violent exertions, long fasting, the want of natural rest, severe evacuations, errors in diet, intemperance in drinking, suddenly exposing the body to cold when heated much beyond its usual temperature, And above all inordinate exertions of any kind

Symptoms

Languor, yawning, stretching, gaping listlessness &c pain in the head, back and lumbar vertebræ, and in the

extremities, particularly the lower; nausea and vomiting of bilious matter, alternate chills and flushes of heat. After the fever is established, the pulse becomes full, strong, active and voluminous, there is a determination of blood to the head, and pain with occasional nausea and vomiting, hot skin, suffused or yellow eye, oppression about the precordia, tenderness of the epigastric region, and sometimes delirium, the tongue is generally covered with a dark or brown fur, and the stools very bilious, generally, when under the influence of a cathartic, urine high coloured and scanty, often depositing a lateritious sediment. These symptoms occurring together, enables the practitioner to form an accurate diagnosis.

Prognosis

The pulse becoming softer, slower and more natural in every respect, the tongue clean and moist, the skin soft and perspiring, no determination to the head, the urine copious and depositing a lateritious sediment, the mind tranquil, and steadiness of the nervous system are favourable symptoms. But on the contrary, where there is great anxiety and loss of strength, intense heat, stupor or delirium, irregularity in the pulse, twitching of the hands and fingers, and general subsultus tendinum, picking at the bed clothes, hiccups, involuntary discharges by urine and stool, and such like symptoms, pourtray evidently the certain dissolution of the patient

Treatment

We generally find

in this fever, the stomach and rest of the alimentary canal, affected in a higher degree, than other parts of the body. And therefore emetics and cathartics are usually the first means that present themselves to the notice of the practitioner. In this fever it is necessary to pay early attention to the state ~~the~~ of the stomach, and if there be any crudities or collections of bile producing nausea and vomiting, to dislodge them by administering an emetic. To assist the operation of which, the patient should drink freely of lukewarm water or an infusion of Chamomile flowers. Emetics should be continued during the continuance of the fever, when ever there is nausea or vomiting of bile and the tongue furred,

as they completely correct the vitiated secretions of the stomach. For this purpose the Tartarised Antimony is preferred either alone or in conjunction with ipecacuanha. To remove the feculent contents of the bowels it is necessary to give some purgative, the best of which is Calomel, Jalap, Rhubarb, Aloes and Gamboge. And throughout the remainder of the disease the body should be kept open or in a soluble state, if necessary by the repetition of some of the above mentioned medicines, or Castor oil or aperient enemata, as the occasion may require. Where the disease seems to be kept up by a redundant secretion of bile, mild purgatives will be still more necessary. as a few grains of Calomel joined with a small quantity of Jalap, gamboge

or aloes generally answer the purpose.
Where the pulse is strong full and active we should never omit to detract blood. As we thereby reduce vascular action, and ought by no means to be neglected, Where the disease has arisen in a young person of plethoric habit, and the attack of fever has been severe, with considerable flushing of the face, redness of the eyes, and a full hard pulse, we must then advise the detraction of twelve or sixteen ounces of blood drawn from a large orifice, and not by repeated bleedings: As by the former mode, there will be greater temporary, but less permanent weakness induced by the evacuation, and should be repeated as the circumstances of the case demands. It is better in such

cases to detract blood previous to the administration of emetics or purgatives, as they generally act better after venaesection. We should though be cautious how we use the lancet in warm climates, as it is generally improper to use the lancet to any great extent. as it produces great prostration of strength. But on the contrary by neglecting to let blood, when the pulse is hard, full, and tense, the respiration hurried, breath hot, skin dry, and the head highly painfull, we should commit a dangerous error and endanger the life of the patient. Great thirst proceeds either from a vitiated state of the mucous tissue of the primae viae, or from an accumulation of bile or sordes. If from the former give small doses of Calomel, if from the latter a gentle emetic. We should also where

there is great heat, and much thirst prevails, to use refrigerants. The best of which is the nitras potassae, which may be combined with others of that Cl ass. or with whatever the patient uses for ordinary drink, or joined with Tart ar emetic. Acids of all kinds are refr igerants, when sufficiently diluted with water. Those most frequently used are the sulphuric, muriatic and the vegitable and more particularly the latter, such as the acids of lemons, tamarinds, oranges, Currants &c As a refrigerant cold water may be drank. To arrest the febrile course and moderate the excess of heat and restoring healthy action, cold app lications has been of late years hig- hly extolled. And it is in the early stage that they are useful, when the

skin is hot and the pulse active and wh
ere there are no catarrhal symptoms, or in
flamatory affection of the lungs present.
But in the advanced stage, we should ad
opt this remedy with caution, and a
carefull consideration of the attendant
circumstances. We may use such as
the following. Assponging the body with
cold water, or by pouring it on from a
watering pot, or dashed on with some fo
rce from a pail or some similar vessel.
I think the former the most safe, and it
should therefore be prefered. Where there
is irritability of the stomach we may
also give the effervescing draught, lime
water and milk, or new milk alone.
With a view to determine the circul
ation to the surface of the body. It will
be necessary to resort to medicines poss
essing this peculiar power. as emetics,

and particularly the antimonial preparations, given in small nauseating doses, have this peculiar property. And the dovers powder is an invaluable remedy in febrile affections, and is preferable to almost any other diaphoretic, given at bed time they elicit a fine diffusive perspiration, and at the same time procure sleep which is generally very desirable. The warm bath, or fomenting the lower extremities, are remedies sometimes resorted to, to produce gentle diaphoresis. when they relieve delirium, procure sleep, and readily borne by the patient, we may be assured of their propriety. Sweating though when produced, by heating or stimulating medicines is sure to prove injurious. It likewise proves hurtful when excited by much exer

nal heat, instead of relieving the frequency, fullness, and hardness of the pulse, it increases it, also the anxiety and difficulty of breathing, head ache and delirium. When sweating is partial and confined to the superior parts of the body, it will be more likely to prove mischevious than salutary. If the irritability and distress of the stomach is not abated by the effervescing draught or lime water and milk, we should add a few drops of laudanum with a little cinnamon. In this fever partial evacuations, such as purging and sweating, which have no tendency to prove critical often arise, the former may be checked by astringents, such as are generally used in diarrhoea. The latter by keeping the patients body cool, by washing the body occasionally with cold

water by means of a sponge, and at the same time administering refrigerants. We may distinguish critical evacuations, from those which are not by attending to the changes, which take place in the system. If purging arises and the tongue continues foul, the skin hot and dry, without any abatement of heat and thirst, we may regard it as unfavourable. But on the contrary the tongue becoming clean and moist; the pulse moderating; the febrile symptoms abating, and a gentle sweat diffused universally over the body, then we may expect a speedy solution of the fever. In the progress of this fever, it sometimes happens that particular parts of the body are much more affected than others, as violent

pains in the head, stupor, or delirium arise, And are to be treated by the application of cold at its commencement, as cold water, or ice pounded and put into a bladder. If these fail, topical depletion, opening the temporal artery, leeches, cups &c will be found of utility. If these fail remove the hair of the head, which of itself is beneficial, and next apply a blister, to be kept on for twenty four hours. When there is an unusual coldness of the extremities with a sinking pulse, apply blisters to the ankles, wrists, and inside of the legs and thighs, and stimulating cataplasms to the soles of the feet and palms of the hands. They will often speedily relieve those symptoms. at the same time giving internally, camphor, musk ammonia

and aether, either alone or in combination, and allowing the patient a liberal use of wine. There is often a great interruption of sleep. It is unfortunately, however, that it cannot be easily procured with safety to the patient, as opium is generally prejudicial in all fevers except those of the typhus kind. If necessity obliges us to use sedatives, the spiritus aetheris nitrosi and Hoffmans anodyne liquor will be the least exceptionable. Where the fever is kept up merely by weakness and irritability of the stomach, opium given in small doses may be of service. If it is found to procure refreshing sleep, the dose may be repeated as the circumstances of the case may demand. But if rest is disturbed it should be discontinued. Where opium is forbidden

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on account of delirium, we may place a pillow of hops under the patients head, this remedy has sometimes proved to be of singular utility, it may also, be exhibited in the form of tincture or extract. In some instances the fever is kept up solely by debility. If the symptoms are mild, we may venture to prescribe the peruvian bark, it may be used either in substance, infusion or decoction, generally using, that which is least disagreeable to the patients stomach. If on trial, the medicine sits easy on the stomach, and the patient sleeps well, breathes easy, and finds no increase of heat we may then continue its use. The efficacy of this medicine is improved by the addition of a few drops of sulphuric acid. The bark is apt with many

people on first taking it, to run off by the bowels; we should then add five or six drops of laudanum to each dose.

We sometimes find it will not sit easy on the stomach, in almost any dose. In such cases, we may substitute the use of the Quassia, or any of the astringent bitters. The patients food should be of light and easily digested ~~[illegible]~~ substances, as sago, tapioca, indian arrow root, preparations of barley &c. He should carefully avoid animal food, as it would increase the heat of the body, and quicken the circulation, by acting as a stimulus.

For drink he may use barley water, thin gruel, toast and water, linseed tea, milk whey, lemonade. apple water or an infusion of dried peaches &c avoiding all stimulating

potations. When the patient is in a convalescent state he should avoid any fatigue, or exposure to cold or sun. As restoratives he may use a generous diet but very digestible, and a moderate use of wine will be serviceable, and if the season of the year will admit cold bathing by affusion. A change of air with moderate, daily, exercise either in a carriage or on horseback, graduated to the strength of the patient, will prove powerful auxiliaries in enabling the patient to regain perfect health. Where the appetite is defective, we may use stomachic bitters, such as are used in dyspepsia.
We will generally find this to be all that is necessary for the cure of our ordinary bilious fever. — . —